

IN THE SPECIFICATION

Please replace the last full paragraph on page 20 (paragraph 61) with the following replacement paragraph:

It should be appreciated that while Figures 6 and 7 illustrate a one to one correspondence between texels and pixels, (142-2 and 142-1, respectively, of Figure 6, and 156-1, 156-2, and 156-3, respectively, of Figure 7) the invention is not limited to this relationship. That is, multiple texels may correspond to one pixel, e.g., minification, and alternatively one texel may correspond to multiple pixels, e.g., magnification. Additionally, these resampling operations may be filtered to avoid aliasing artifacts.

Please replace the first full paragraph on page 24 (paragraph 66) with the following replacement paragraph:

One skilled in the art will appreciate that the rendering process can take place using either of two types of illumination models, namely, direct or global illumination. Direct illumination models account for light reflecting directly from the light sources to the viewer within a view plane via one direct reflection from the surface, while global illumination models also model the reflection of light to the viewer after multiple reflections between surfaces. The polygon rendering pipeline is typically used to produce images of scenes which have been built up from objects defined as a collection of polygonal planar faces. The polygon pipeline may use a direct illumination model and handle curved surfaces by splitting them into polygonal planar facets. However, in order to simulate a more realistic display global illumination must be used. For example, ray-

tracing methods may be used to model the specular reflections and refractions of light in a scene. As is generally known, ray tracing models inter-object reflections and light transmissions. However, this modeling comes at a high computational cost where complex scenes with many objects may take hours to compute. As will be explained in more detail below, the use of a stream processor in combination with directional basis functions minimizes the work, i.e., computation, that is necessary in order to approximate the global illumination effects in real time.

Please replace the paragraph straddling pages 24 and 25 (paragraph 67) with the following replacement paragraph:

Figure 13A is a simplified schematic diagram illustrating a biased approximator for use in illustrating a direct illumination component in accordance with one embodiment of the invention. Here, a coherent bundle of rays 282 283 are fired from point P to light source 280. If light source 280 is the only light source, then rays 282 283 are fired only at light source 280. The biased approximator, also referred to as importance sampling, manages where rays are fired, i.e., strategically computing the firing of the rays. Thus, computing power is not wasted by shooting rays in every direction in order to determine a direct illumination component of the lighting function. That is the strategic shooting of the rays manages the amount of computing power required. It should be appreciated that the rays are dependent on where point P 270 is located, therefore, pre-calculation is not an option here as the coherent bundle of rays is different for each point on the surface of object 282. However, where self-transfer and

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self-interreflection shading components are required in order to provide a more realistic image an unbiased approximator is used.